

REMARKS

The Office Action dated March 15, 2010 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

In accordance with the foregoing, claims 1, 14, 24, 27, and 28 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Support for the amended features may be found, at least, in FIG. 2 and page 10, lines 4-11. No new matter is being presented, and approval and entry are respectfully requested. As will be discussed below, it is also requested that all of claims 1, 3-14, and 16-28 be found allowable as reciting patentable subject matter.

Claims 1, 3-14, and 16-28 are pending and under consideration.

REJECTION UNDER 35 U.S.C. § 101:

In the Office Action, claim 28 was rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

In response, claim 28 has been amended to more particularly point out and distinctly claim the invention. It is respectfully requested that the rejection to claim 28 be withdrawn.

REJECTION UNDER 35 U.S.C. § 103:

Claims 1, 3, 4, 7-11, 13, 14, 16, 17, 20-22, 24, and 26-28 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,471,634 to Wenzel et al. (“Wenzel”) in view of U.S. Patent No. 6,947,724 to Chaney (“Chaney”). The Office Action took the position that Wenzel and Chaney disclose all of the subject matter of the claims. This rejection is respectfully traversed.

Claim 1, upon which claims 3-13 depend, is directed to a method including establishing an accounting session between a network element and a charging function for the session, wherein the network element includes a gateway of an internet protocol based communication system. The method also includes initiating a change in the accounting session on the initiation of the charging function. The method further includes charging for services in the communication system based on the accounting session. The initiating a change in the accounting session occurs during an ongoing session and includes detecting a change in charging for services by the charging function and transmitting a request to update the accounting session from the charging function to the network element. The initiated change includes performing at least one of an increase and decrease in charges for services currently implemented in the ongoing session.

Claim 14, upon which claims 16-23 depend, is directed to a charging element including a monitor unit configured to monitor charging in an internet protocol based communication system. The charging element also includes an establishment unit configured to establish an accounting session with an application. The charging element

further includes an information unit configured to inform a network element configured to control an associated communication session of the accounting session, wherein the network element includes a gateway of the internet protocol based communication system. The charging element additionally includes an initiation unit configured to initiate a change in the accounting session, the change occurring during an ongoing session. The initiation unit includes a detector configured to detect a change in charging for services by the charging function and a transmission unit configured to receive a request to update the accounting session. The initiated change includes performing at least one of an increase and decrease in charges for services currently implemented in the ongoing session.

Claim 24, upon which claims 25 and 26 are dependent, recites a communication system. The system includes a network element configured to control a session for the provision of services in an internet protocol based communication system. The network element comprises a gateway of the internet protocol based communication system. The system also includes an application for the session, a control function for the session, and a charging function. At least one accounting session is configured to be established between the charging function and at least one of the network element, the application, or the control function. The charging function is configured to initiate a change in the at least one accounting session during an ongoing session by detecting a change in charging for services by the charging function and transmitting a request to update the accounting session to the network element. The initiated change includes performing at least one of

an increase and decrease in charges for services currently implemented in the ongoing session.

Claim 27 is directed to a charging element including monitor means for monitoring charging in an internet protocol based communication system. The charging element also includes establishment means for establishing an accounting session with an application. The charging element further includes information means for informing a network element configured to control an associated communication session of the accounting session, wherein the network element includes a gateway of the internet protocol based communication system. The charging element additionally includes initiation means for initiating a change in the accounting session, the change occurring during an ongoing session. The initiation means includes detecting means for detecting a change in charging for services by the charging function and transmission means for receiving a request to update the accounting session. The initiated change includes performing at least one of an increase and decrease in charges for services currently implemented in the ongoing session.

Claim 28 is directed to a computer program which performs the operations of method claim 1. However, claim 28 also has its own scope and should be interpreted accordingly.

Applicants respectfully submit that Wenzel and Chaney, individually or combined, fail to disclose or suggest all of the elements of any of the presently pending claims.

Wenzel describes an account monitoring for a mobile node by a home agent communicating with an AAA server computer. FIG. 4 of Wenzel shows a message sequence implemented during initial registration of a mobile node. See column 7, lines 14-64. The Accounting-Request (Start) message is sent to a home AAA server 75 on the home network 5, initiating accounting for the wireless communication session by mobile node 64. In step 325 of FIG. 4, registration for the mobile node 64 is confirmed and completed by a Registration Reply (RRP) message from the foreign agent 30.

However, Wenzel does not describe that the initiation of the change in the accounting session occurs during an ongoing session **and** includes detecting a change in charging for services by the charging function **and** transmitting a request to update the accounting session from the charging function to the network element. There is no detection in Wenzel of a change in the charging for services by a charging function. Rather, the mobile node 764 uses the old foreign agent 730 until its movement crosses communication boundaries from the first transceiver 755 to the second transceiver 753. See column 10, lines 1-6. The registration sequence registers the new care-of address with the home agent 780, so that packets addressed to the mobile node 764' will be routed over the foreign network to the correct destination. See column 10, lines 7-19. Then, when the mobile node 764' changes its wireless communication connection, the accounting information must be updated.

Wenzel does not teach or suggest that the accounting information occurs during an ongoing session and includes detecting a change in charging for services by the charging

function and transmitting a request to update the accounting session from the charging function to the network element. There is no detecting a change in charging for services by the charging function and no transmission to request to update the accounting information in Wenzel during an ongoing session. Therefore, Wenzel fails to teach or suggest, at least, that “the initiating a change in the accounting session *occurs during an ongoing session and comprises detecting a change in charging for services by the charging function and transmitting a request to update* the accounting session from the charging function to the network element,” emphasis added, as recited in independent claim 1. Rather, Wenzel describes a different application in which the updating is only performed when the when the mobile node 764’ changes its wireless communication connection. Wenzel clearly includes a different configuration from the claimed invention.

In addition, at step 825, the home agent 780 of Wenzel generates and transmits a message to being new accounting for a new system resource. See column 10, lines 39-50. At step 830, the home agent 780 transmits a Registration Reply (RRP) message to the new foreign agent 735, confirming registration and updating of the care-of address on the routing table maintained on the home agent 780. However, similar to other portions of Wenzel, this portion of Wenzel also fails to teach or suggest, “wherein the initiating a change in the accounting session occurs during an ongoing session and comprises detecting a change in charging for services by the charging function and transmitting a request to update the accounting session from the charging function to the network

element, and wherein the initiated change comprises performing at least one of an increase and decrease in charges for services currently implemented in the ongoing session,” as recited in independent claim 1. Accordingly, Wenzel is deficient in the features of independent claim 1 as relied upon in the Office Action.

The Office Action correctly recognized that Wenzel fails to teach or suggest, “wherein the initiated change comprises performing at least one of an increase and decrease in charges for services currently implemented in the ongoing session,” as recited in independent claim 1. In addition, for at least the reasons presented above, Wenzel fails to teach or suggest, “wherein the initiating a change in the accounting session occurs during an ongoing session and comprises detecting a change in charging for services by the charging function,” as recited in independent claim 1. Accordingly, the Office Action relied upon Chaney as curing this deficiency in Wenzel. However, for at least the various reasons discussed below, Chaney fails to cure the deficiencies of Wenzel.

Chaney describes a network for billing a call placed by a user based on a reported traffic load in the network. Chaney describes that the duration of a call is reported to an accounting server (not shown) which determines the charge for the call based on the call duration and the billing rate in effect at the time of the call. See column 6, lines 5-9. FIG. 3 shows that information is downloaded to a user’s S-CSCF *during a registration process*. (Emphasis added) See column 6, lines 9-19. Chaney also determines whether or not User-A is entitled to a special billing rate.

However, similar to Wenzel, Chaney fails to teach or suggest, at least, “initiating a change in the accounting session occurs during an ongoing session and comprises detecting a change in charging for services by the charging function and transmitting a request to update the accounting session from the charging function to the network element,” as recited in independent claim 1. Instead of initiating a change in the accounting session, detecting a change in charging for services by the charging function, and charging for services based on the accounting session, Chaney describes that the charges are based on the duration of a call. Then, it is determined whether a special billing arte applies.

Furthermore, Chaney describes that nodes register themselves with the network as having specified service types and certain capabilities. See column 6, lines 53-66. A network operator then establishes a billing scheme based on the actual traffic load at the time of the call. It is the operator in Chaney that controls and establishes the billing scheme. Contrary to the present invention and just as in Wenzel, there is no initiating of a change in an accounting session in Chaney during an ongoing session and transmitting a request to update accounting session. Similar to Wenzel, Chaney fails to teach or suggest, at least, “wherein the initiating a change in the accounting session occurs during an ongoing session and comprises detecting a change in charging for services by the charging function and transmitting a request to update the accounting session from the charging function to the network element, and wherein the initiated change comprises performing at least one of an increase and decrease in charges for services currently

implemented in the ongoing session,” as recited in independent claim 1. In Chaney, there is no initiating of a change by performing at least one of an increase and decrease in charges for services implemented in an ongoing session. It appears that in Chaney, once the call is terminated, an operator determines the rate or any special rates that apply to the call.

Therefore, assuming *arguendo*, that Wenzel and Chaney were combined, a combination of these references would provide a message sequence where the mobile node connects to a new foreign agent. In this sequence, when the mobile node changes its wireless communication connection, the accounting information would be updated and new accounting setup for the ongoing communication session using the new system resources. The duration of a call would then be reported to an accounting server which determines the charge for the call based on the call duration and the billing rate in effect at the time of the call. A network operator would then establish a billing scheme based on the actual traffic load at the time of the call. Clearly, a person of ordinary skill in the art would appreciate that such combination of Wenzel and Chaney would fail to teach or suggest the features associated with the initiating a change in the accounting session occurs during an ongoing session and including detecting a change in charging for services by the charging function and transmitting a request to update the accounting session from the charging function to the network element as recited in independent claim 1. Nothing in such combination of Wenzel and Chaney would teach or suggest, at least, “charging for services in the communication system based on the accounting

session, wherein the initiating a change in the accounting session occurs during an ongoing session and comprises detecting a change in charging for services by the charging function and transmitting a request to update the accounting session from the charging function to the network element, and wherein the initiated change comprises performing at least one of an increase and decrease in charges for services currently implemented in the ongoing session,” as recited in independent claim 1.

Independent claims 14, 24, 27, and 28 each have their own scope. Independent claims 14, 24, 27, and 28, however, recite at least some similar features to those discussed above with respect to claim 1. Accordingly, Applicants respectfully request that the rejection of claims 14, 24, 27, and 28 be withdrawn for similar reasons to those for which the rejection of claim 1 should be withdrawn.

Accordingly, in view of the foregoing, it is respectfully requested that the rejections to independent claims 1, 14, 24, 27, and 28 be withdrawn and that claims 1, 3, 4, 7-11, 13, 14, 16, 17, 20-22, 24, and 26-28 be allowed.

Claims 5, 6, 18, 19, and 23 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wenzel and Chaney in view of U.S. Patent No. 6,973,309 of Rygula et al. (“Rygula”). The Office Action took the position that Wenzel and Chaney teaches all of the subject matter of the claims except for acknowledgement to the charging function. The Office Action then relied on Rygula to cure the deficiencies of Wenzel and Chaney. This rejection is respectfully traversed.

Wenzel and Chaney are discussed in detail above. Rygula generally relates to a method of forcing re-direction of handoffs for wireless mobile nodes using pre-paid mobile services on a mobile network. At Step 272, a first non-mobile service network device detects that an amount of pre-paid mobile services purchased by a wireless mobile node has run out. See column 22, lines 41-67. At Step 274, the first non-mobile service network device sends an accounting stop message to an authentication authorization and accounting server to indicate that the pre-paid mobile services for the wireless mobile node has run out. At Step 276, an accounting acknowledgement message is received from the authentication authorization and accounting server indicating the amount of pre-paid mobile services for the wireless mobile node has been updated to indicate the amount of pre-paid mobile services has run-out. At Step 278, an established communications session for the wireless mobile node is temporarily suspended. At Step 280, the wireless mobile node is re-directed to a registration server with a re-direct request message.

Claims 12 and 25 are dependent upon claims 1 and 24 and contain all of the limitations thereof. As discussed above, the teachings of Wenzel and Chaney fail to disclose or suggest all of the elements of independent claims 1 and 24. In addition, Rygula fails to cure the deficiencies in Wenzel and Chaney because Rygula also fails to disclose or suggest, at least, “wherein the initiating a change in the accounting session occurs during an ongoing session and comprises detecting a change in charging for services by the charging function and transmitting a request to update the accounting

session from the charging function to the network element, and wherein the initiated change comprises performing at least one of an increase and decrease in charges for services currently implemented in the ongoing session”, as recited in independent claim 1, or similarly recited in independent claims 14, 24, 27 and 28. There is no description or suggestion in Rygula that would enable a person of ordinary skill in the art to arrive to the claimed invention.

A combination of Wenzel, Chaney, and Rygula would provide in a handoff for pre-paid mobile services, a message sequence where the mobile node connects to a new foreign agent. In this sequence, when the mobile node changes its wireless communication connection, the accounting information would be updated and new accounting setup for the ongoing communication session using the new system resources. The duration of a call would then be reported to an accounting server which determines the charge for the call based on the call duration and the billing rate in effect at the time of the call. A network operator would then establish a billing scheme based on the actual traffic load at the time of the call. However, this last statement, which is based on the description of Chaney, cannot work with the features of Rygula as this reference deals with pre-paid mobile services. Therefore, the combination of the cited references would render, at least, Chaney and Rygula unsatisfactory for their intended purpose. MPEP 2143.01(V) states “the proposed modification cannot render the prior art unsatisfactory for its intended purpose.” This section of the MPEP explains that “If proposed modification would render the prior art invention being modified unsatisfactory for its

intended purpose, then there is no suggestion or motivation to make the proposed modification.”

Accordingly, it is respectfully submitted that the Office Action’s rejection does not pass muster as a *prima facie* rejection to show obviousness, and should be withdrawn. Timely withdrawal of the rejection and allowance of the claims is respectfully requested.

Thus, the combination of Wenzel and Chaney and Rygula fails to disclose or suggest all of the elements of claims 1 and 24. Furthermore, claims 5, 6, 18, 19, and 23 should be allowed for at least their dependence upon claims 1 and 14, and for the specific limitations recited therein.

Claims 12 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wenzel and Chaney in view of U.S. Patent No. 6,999,449 of Barna et al. (“Barna”). The Office Action took the position that Wenzel and Chaney teaches all of the subject matter of the claims except for acknowledgement to the charging function. The Office Action then relied on Barna to cure the deficiencies of Wenzel and Chaney. This rejection is respectfully traversed.

Wenzel and Chaney are discussed in detail above. Barna generally relates to a system and method of monitoring and reporting accounting data based on volume. Figure 1 of Barna is a signaling diagram that illustrates the flow of messages between access and accounting nodes and in IP network when implementing a method of

accounting based on the expiry of a predetermined volume of data transferred using the stop record trigger.

Claims 12 and 25 are dependent upon claims 1 and 24 and contain all of the limitations thereof. As discussed above, the teachings of Wenzel and Chaney fail to disclose or suggest all of the elements of independent claims 1 and 24. In addition, Barna fails to cure the deficiencies in Wenzel and Chaney because Barna also fails to disclose or suggest “wherein the initiating a change in the accounting session occurs during an ongoing session and comprises detecting a change in charging for services by the charging function and transmitting a request to update the accounting session from the charging function to the network element, and wherein the initiated change comprises performing at least one of an increase and decrease in charges for services currently implemented in the ongoing session”, as recited in independent claim 1, or similarly recited in independent claims 14, 24, 27 and 28. Thus, the combination of Wenzel and Chaney and Barna fails to disclose or suggest all of the elements of claims 1 and 24. Furthermore, claims 12 and 25 should be allowed for at least their dependence upon claims 1 and 24, and for the specific limitations recited therein.

CONCLUSION:

In view of the above, Applicants respectfully submit that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants further submit that the subject matter is more than sufficient to render the

claimed invention unobvious to a person of skill in the art. Applicants therefore respectfully request that each of claims 1, 3-14 and 16-28 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1, 3-14 and 16-28 be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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Enclosure: Request for Continued Examination